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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/541,007

06/28/2005

Mark J Childs

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

ZHU, JOHN X

ART UNIT

PAPER NUMBER

2831

MAIL DATE

DELIVERY MODE

04/03/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/541,007	Applicant(s) CHILDS, MARK J	
	Examiner JOHN ZHU	Art Unit 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Receipt is acknowledged of the Appeal Brief filed on 9/11/06. Upon careful consideration of the application and the prior art, the examiner now applies a new ground of rejection against the claims 1, 2, 14, 15 and 16 in view of recognition that the reference Kozlowski (6,538,245 B1) teaches the claimed subject matter closer than the previous relied combination of Busse et al. (6,653,636 B2) in view of Abdalla et al. (NPL cited by the applicant), the delay in citation of the above art is regretted.

PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

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Double Patenting

2. Claims 1-10, 11, 12-19 of this application conflict with claims 1-10, 1, 12-19 of Application No. 10/597246. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

3. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

4. Claims 1-10, 11, 12-19 provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-10, 1, 12-19, respectively, of copending Application No. 10/597246. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

5. Claim 20 is rejected as being depended on a rejected double patenting claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 2, 13, 14 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Kozlowski (6,538,245 B1).

With respect to claims 1 and 14, Kozlowski discloses a image sensor and method of measuring of measuring light intensity comprising a plurality of pixels (column 1, line 11, “imaging arrays”), each pixel comprising:

a light sensor element (PD1),

a sensor voltage across the element varying depending on the light incident on the element (voltage across PD1),

a voltage amplifier amplifying the sensor voltage and having a gain greater than 1 (transistors M2 and M6), and

charging a sampling capacitor ($C_{S/H}$) being charged by a voltage amplifier and measuring the flow (sample and hold, claim 2.).

With respect to claims 2 and 16, Kozlowski discloses a pixel storage capacitor (C_{PD}) connected to light sensor element (PD1), and the gain between the capacitor and the sampling capacitor is greater than 1 (M2 and M6/ “high-gain”, abstract).

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With respect to claim 13, Kozlowski further discloses a input switch (Φ RST) for applying a fixed potential across the light sensor element to reset the photodetector capacitance.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kozlowski (6,538,245 B1) as applied to claims 1 and 14 above, and further in view of Kitamura (6,988,131 B2).

With respect to claims 10 and 19, Kozlowski does not explicitly disclose the gain of the amplifier is in the range 2 to 5.

However, amplifications depend on the gains required for the corresponding image being detected. Kitamura discloses adjusting the gain (column 3, lines 56-58).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kozlowski to adjust the gain to an appropriate level as taught by Kitamura for the purpose of placing the average level of one picture into an appropriate range (column 3, lines 56-58).

Allowable Subject Matter

10. Claim 6 would be allowable if rewritten to overcome the double patenting rejection.

11. Claims 3-5,7-9,11,12,15,17,18 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and if rewritten to overcome the double patenting rejection.

12. The following is a statement of reasons for the indication of allowable subject matter: claim 3 is allowable over the art of record because the prior art does not teach or render obvious the entire combination including specifically an image sensor wherein the capacitance of the sampling capacitor is less than 10 times the capacitance of the pixel storage capacitor.

Claims 4 and 5 are allowable as they depend from claim 3.

Claim 6 is allowable over the art of record because the prior art does not teach or render obvious the entire combination including specifically an image sensor wherein the capacitance of the sampling capacitor is in the range 0.5 pF to 3 pF, and the capacitance of the pixel storage capacitor is in the range of 0.5 pF to 3 pF.

Claim 7 is allowable over the art of record because the prior art does not teach or render obvious the entire combination including specifically an image sensor wherein

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the capacitance of the sampling capacitor is less than 10 times a self capacitance of the light sensor element.

Claims 8 and 9 are allowable as they depend from claim 7.

Claim 11 is allowable over the art of record because the prior art does not teach or render obvious the entire combination including specifically an image sensor wherein a bias voltage is connected to the gate of the other transistor of the voltage amplifier.

Claims 12 and 20 are allowable as they depend from claim 11.

Claim 15 is allowable over the art of record because the prior art does not teach or render obvious the entire combination including specifically a method of measuring light intensity wherein a reset operation is carried out before amplifying the sensor, wherein the reset operation comprising applying a known potential to one terminal of the sampling capacitor and the amplified voltage being subsequently applied to the other terminal of the sampling capacitor.

Claim 17 is allowable over the art of record because the prior art does not teach or render obvious the entire combination including specifically a method of measuring light intensity wherein the capacitance of the sampling capacitor is less than 2 times the capacitance of the pixel storage capacitor.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN ZHU whose telephone number is (571)272-5920. The examiner can normally be reached on M-F, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Diego Gutierrez/
Supervisory Patent Examiner, Art Unit 2831

John Zhu
Examiner
Art Unit 2831

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